



10551833 /GAB: 1647

Attorney's Docket No.: 20724-011US1 / UR 1206

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Roman J. Giger

Art Unit : Unknown

Serial No.: 10/551,833

Examiner: Unknown

Filed

: October 3, 2005

Confirmation No.: 3920

Title

: IDENTIFICATION OF NOGO-RECEPTORS AND METHODS RELATED

THERETO

MAIL STOP AMENDMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicants request consideration of the references listed on the attached PTO-1449 form. Under 37 C.F.R. § 1.98 (a)(2)(ii), only copies of foreign patent documents and/or non-patent literature are enclosed. Copies of any listed U.S. patents or U.S. patent application publications can be provided upon request.

This statement is being filed within three months of the filing date of the application or before the receipt of a first Office Action on the merits. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 10 (a0 /06

Tiffany B. Salmon, Ph.D.

Reg. No. 55,589

Fish & Richardson P.C. 1180 Peachtree Street, N.E. 21st Floor Atlanta, GA 30309

Telephone: (404) 892-5005 Facsimile: (404) 892-5002

12008141.doc

Sheet <u>1</u> of <u>5</u>

Substitute Form PTO-1449

U.S. Department of Commerce Patent and Trademark Office

Attorney's Docket No. 20724-011US1

Application No.

Information Disclosure Statement by Applicant

(Use several sheets if necessary)

Applicant Roman J. Giger

Filing Date

Group Art Unit

(37 CFR §1.98(b))

			U.S. Pate	ent Documents			
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
/CMW/	AA	20020077295	06-20-2002	Strittmatter	9900002XX900000	58-00-0000 SKISO QOO OO OO SKISO K	
00000000	AB	20020012965	01-31-2002	Strittmatter	100000000000000000000000000000000000000	3550000x	
	AC	20030113325	06-19-2003	He, et al.	200000000000000000000000000000000000000	50000000000000000000000000000000000000	
W	AD	20040029169	02-12-2004	He, et al.	300000000000	00000000000	
/CMW/	AE	20040259092	12-23-2004	Barske, et al.			
							-

	Foreig	n Patent Doci	uments or P	ublished Foreign	Patent A	Application	าร	
Examiner	Desig.	Document	Publication	Country or			-	lation
Initial	ID	Number	Date	Patent Office	Class	Subclass	Yes	No
/CMW/	AF	WO 03/018631	03-06-2003	PCT	000000000000000000000000000000000000000	20000000000000000000000000000000000000		
/CMW/	AG	WO 03/035687	05-01-2003	PCT	558860000000000000000000000000000000000	0000 <u>0175000</u> 0		
	AH							
	AI							
	AJ							

	Other Documents (include Author, Title, Date, and Place of Publication)			
Examiner Initial	Desig. ID	Document		
		Adams et al., "A role for syndecan-1 in coupling fascin spike formation by thrombospondin-1" <i>J. Cell Biol.</i> , 2001. 152(6):1169-82.		
	AL	Bandtlow and Zirnnlermann, "Proteoglycans in the developing brain: new conceptual insights for old proteins." <i>Physiol. Rev.</i> , 2000. 80(4): 1267-90.		
V	AM	Barnett et al., "Signaling by glial cell line-derived neurotrophic factor (gdnf) requires heparan sulphate glycosaminoglycan." <i>J Cell Sci</i> , 2002. 11 5(23):4495-503.		
/ČMW/	AN	Barton et al., "Structure and axon outgrowth inhibitor binding of the Nogo-66 receptor and related proteins." <i>EMBO J</i> 2003. 22(13):3291 -302.		

Examiner Signature	Date Considered
/Cherie M. Woodward/	12/24/2007
EXAMINER: Initials citation considered. Draw line through citation if no	t in conformance and not considered. Include copy of this form with
next communication to applicant.	• •

Sheet <u>2</u> of <u>5</u>

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 20724-011US1	Application No.	
Information Disclosure Statement by Applicant (Use several sheets if necessary)		Applicant Roman J. Giger		
		Filing Date	Group Art Unit	
(37 CFR §1.98(b))				

	Other Documents (include Author, Title, Date, and Place of Publication)			
Examiner Initial	Desig. ID	Document		
/CMW/	AO	Berndt et al., "Cloning and characterization of human sytidconn-3." <i>J Cell Biochem.</i> , 2001. 82(2):246-59.		
000000000000000000000000000000000000000	AP	Bowers et al., "Expression of vhs and VP16 during HSV-1 helper virus-free amplicon packaging enhances titers" <i>Gene Ther.</i> , 2001. 8(2):111-20.		
000000000	AQ	Bregman et al., "Recovery from spinal cord injury mediated by antibodies to neurite growth inhibitors." <i>Nature</i> , 1995. 378(6556):498-501.		
0000000000	AR	Brosamle et al., "Regeneration of lesioned corticospinal tract fibers in the adult rat induced by a recombinant, humanized IN-1 antibody fragment." J. Neurosci., 2000. 20(21):8061-8.		
0000000	AS	Carey, "Syndecans: Multifunctional cell-surface co-receptors." J. Biochem., 1997. 327(1):1-16.		
600000000000	AT	Caroni and Schwab, "Antibody against myelin-associated inhibitor of neurite growth neutralizes non-permissive substrate properties of cns white matter." <i>Neuron</i> , 1988. 1(1):85-96.		
85000000000	AU	Chen et al., "Nogo-a is a myelin-associated neurite outgrowth inhibitor and an antigen for monoclonal antibody IN-1." <i>Nature</i> , 2000. 403(6768):434-9.		
3550000000	AV	Collins et al., "Sialic acid specificity of myelin-associated glycoprotein binding." J. Biol. Chem., 1997. 272(2):1248-55.		
000000000000000000000000000000000000000	AW	DeBellard et al., "Myelin-associated glycoprotein inhibits axonal regeneration from a variety of neurons via interaction with a sialoglycoprotein." <i>Molecular and Cellular Neuroscience</i> , 1996. 7:89-101.		
0000000000	AX	Domeniconi et al., "Myelin-associated glycoprotein interacts with the nogo66 receptor to inhibit neurite outgrowth." <i>Neuron</i> , 2002. 35(2):283-90.		
000000000	AY	Ethell et al., "Ephb/syndecan-2 signaling in dendritic spine morphogenesis. <i>Neuron</i> , 2001. 31(6):1001-13.		
000000000	AZ	Fournier et al., "Truncated soluble nogo receptor binds nogo-66 and blocks inhibition of axon growth by myelin." <i>J. Neurosci.</i> , 2002. 22(20):8876-83.		
000000000	AAA	Fournier et al., "Identification of a receptor mediating nogo-66 inhibition of axonal regeneration." Nature, 2001. 409(6818):341-6.		
2000000000	ABB	Fournier and Strittmatter, "Repulsive factors and axon regeneration in the cns." Curr. Opin. Neurobiol., 2001. 11(1):89-94.		
00000000	ACC	Giger et al., "Anatomy of rat semaphorin iii/collapsin-1 mrna expression and relationship to developing nerve tracts during neuroembryogenesis." <i>J Comp Neurol</i> , 1996.375(3):318-92.		
000000000000000000000000000000000000000	ADD	Giger et al., "Adenovirus-mediated gene transfer in neurons: construction and characterization of a vector for heterologous expression of the axonal cell adhesion molecule axonin-1." J. Neurosci. Methods, 1997 1: 99-111.		
0.00.00.00.00.00.00.00.00.00.00.00.00.0	AEE	Giger et al., "Anatomical distribution of the chemorepellent semaphorin iii/collapsin- l in the adult rat and human brain: Predominant expression in the olfactory-hippocampal pathway and the motor system." J. Neurosci. Res., 1998. 1:27-42.		
000000000000000000000000000000000000000	AFF	Giger et al., "Neuropilin-2 is a receptor for semaphorin iv: Insight into the structural basis of receptor function and specificity." <i>Neuron</i> , 1998. 21:1074-1092.		
	AGG	Giger et al., "Neuropilin-2 is required in vivo for selective axon guidance responses to secreted semaphorins." <i>Neuron</i> , 2000. 25(1):29-41.		
/ČMW/	АНН	GrandPre et al., "Nogo-66 receptor antagonist peptide promotes axonal regeneration." <i>Nature</i> , 2002. 417(6888):547-51.		

Examiner Signature /Cherie M. Woodward/	Date Considered 12/24/2007
EXAMINER: Initials citation considered. Draw line through citation if next communication to applicant.	f not in conformance and not considered. Include copy of this form with

Sheet 3 of 5

Substitute Form PTO-1449 U.S. Department of Commerce (Modified) Patent and Trademark Office				
	losure Statement plicant	Applicant Roman J. Giger		
(Use several sheets if necessary)		Filing Date	Group Art Unit	
(37 CFR §1.98(b))				

	Other D	ocuments (include Author, Title, Date, and Place of Publication)
Examiner Initial	Desig. ID	Document
/CMW/	AII	GrandPre et al., "Identification of the nogo inhibitor of axon regeneration as a reticulon protein." <i>Nature</i> , 2000. 403(6768):439-44.
0000000	AJJ	Granes et al., "Ezrin links syndecan-2 to the cytoskeleton." J. Cell Sci. 2000. 113(Pt 7): 1267-76.
000000000000000000000000000000000000000	AKK	Hartmann and Maurer, "Proteoglycans in the nervous systemthe quest for functional roles in vivo." <i>Matrix Biol.</i> , 2001. 20(1):23-35.
90000	ALL	Heinegard and Sommarin, "Proteoglycans: an overview." Methods Enzmol., 1987. 144:305-19.
000000000000000000000000000000000000000	AMM	Hileman et al., "Glycosaminoglycan-protein interactions: Definition of consensus sites in glycosaminoglycan binding proteins." <i>Bioessays</i> , 1998. 20(2):156-67.
***************************************	ANN	Hsueh and Sheng, "Regulated expression and subcellular localization of syndecan heparan sulfate proteoglycans and the syndecan-binding protein CASWLIN-2 during rat brain development." <i>J Neurosci.</i> , 1999. 19(17):7415-25.
000000000	AOO	Josephson et al., "Nogo-receptor gene activity: Cellular localization and developmental regulation of mRNA in mice and humans." <i>J Comp Neurol.</i> , 2002. 453:292-304.
3000000000	APP	Kaksonen et al., "Syndecan-3-deficient mice exhibit enhanced ltp and impaired hippocampus-dependent memory." <i>Mol Cell Neurosci.</i> , 2002. 2l(1):158-72.
00000000	AQQ	Kawai et al., "Mice expressing only monosialoganglioside gm3 exhibit lethal audiogenic seizures." J. Biol. Chem, 2001. 276(10):6885-8.
20000000000	ARR	Kelm et al., "Sialoadhesin, myelin-associated glycoprotein and cd22 define a new family of sialic acid-dependent adhesion molecules of the immunoglobulin superfamily." <i>Current Biology</i> , 1994. 4(11):965-72.
3000000	ASS	Kinnunen et al., "Heparan sulphate and HB-GAM (heparin-binding growth-associated molecule) in the development of the thalamocortical pathway of rat brain." <i>Eur J Neurosci.</i> , 1999. 11(2):491-502.
0000000	ATT	Kobe and Deisenhofer, "The leucine-rich repeat: a versatile binding motif." TIBS, 19:415-420.
200000000000000000000000000000000000000	AUU	Kobe and Kajava, "The leucine-rich repeat as a protein recognition motif." Curr. Opin. Struct. Biol., 2001. 11:725-32.
000000	AVV	Kolodkin et al., "Neuropilin is a semaphorin iii receptor." Cell, 1997. 90(4):757-62.
0000000	AWW	Kolter et al., "Combinatorial ganglioside biosynthesis." J. Biol. Chem., 2002. 277(29): 25859-25862.
	AXX	Kottis et al., "Oligodendrocyte-myelin glycoprotein (omgp) is an inhibitor of neurite outgrowth." <i>J Neurochem</i> , 2002. 82(6):1566-3.
100000000000000000000000000000000000000	AYY	Kunkel-Bagden et al., "Methods to assess the development and recovery of locomotor function after spinal cord injury in rats." <i>Exp Neurol</i> , 1993. 119(2):153-64.
000000000000000000000000000000000000000	AZZ	Li and Raisman, "Schwann cells induce sprouting in motor and sensory axons in the adult rat spinal cord." <i>Journal of Neuroscience</i> , 1994. 14(7):4050-63.
100000000000000000000000000000000000000	AAAA	Liu et al., "Myelin-associated glycoprotein as a functional ligand for the nogo-66 receptor." <i>Science</i> , 2002. 297(5584):1190-3.
<u> </u>	ABBB	Liu et al., "A genetic model of substrate deprivation therapy for a glycosphingolipid storage disorder." J. Clin. Invest. 1999. 103(4): 497-505.
/CMW/	ACCC	Maasho et al., "Efficient gene transfer into the human natural killer cell line, NKL, using the Amaxa nucleofection system." J Immunol Methods, 2004. 284(1-2):133-40

Examiner Signature /Cherie M. Woodward/	Date Considered 12/24/2007
EXAMINER: Initials citation considered. Draw line through citation if no next communication to applicant.	ot in conformance and not considered. Include copy of this form with

Sheet <u>4</u> of <u>5</u>

Substitute Form PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office		Attorney's Docket No. Application No. 20724-011US1		
Information Disclosure Statement by Applicant (Use several sheets if necessary)		Applicant Roman J. Giger		
		Filing Date	Group Art Unit	
(37 CFR §1.98(b))				

(Other D	ocuments (include Author, Title, Date, and Place of Publication)
Examiner Initial	Desig. ID	Document
/GMW/	ADDD	Maguir-Zeis et al., "HSV vector-mediated gene delivery to the central nervous system." Curr. Opin. Mol. Ther., 2001. 3(5):482-90.
	AEEE	McKerracher et al., "Identification of myelin-associated glycoprotein as a major myelin-derived inhibitor of neurite growth." <i>Neuron</i> , 1994. 13(4):805-11.
00000	AFFF	McKerracher and Winton, "Nogo on the go." Neuron, 2002. 36(3):345-8
000000000000000000000000000000000000000	AGGG	Mikol and Stefansson, "A phosphatidylinositol-linked peanut agglutinin-binding glycoprotein in central nervous system myelin and on oligodendrocytes." <i>J Cell Biol.</i> , 1988. 106(4):1273-9.
	АННН	Mukhopadhyay et al., "A novel role for myelin-associated glycoprotein as an inhibitor of axonal regeneration." <i>Neuron</i> , 1994. 13(3):757-67.
	AIII	Niederost, et al., "Bovine CNS myelin contains neurite growth-inhibitory activity associated with chondroitin sulfate proteoglycans" <i>Journal of Neuroscience</i> , 1999. 19(20):8979-89.
0000000000	AJJJ	Niederost et al., "Nogo-a and myelin-associated glycoprotein mediate neurite growth inhibition by antagonistic regulation of rhoa and racl." <i>J Neurosci.</i> , 22(23):10368-76.
000000000	AKKK	Pignot et al., "Characterization of two novel proteins, NgRH1 and NgRH2, structurally and biochemically homologous to the Nogo-66 receptor." <i>Journal of Neurochemistry</i> , 2003. 85:717-28.
000000	ALLL	Prinjha et al., "Inhibitor of neurite outgrowth in humans." Nature. 2000. 403(6768):383-4
000000000000000000000000000000000000000	AMMM	Qiu et al., "Glial inhibition of nerve regeneration in the mature mammalian CNS." Glia, 2000. 29:166-74
000000000000000000000000000000000000000	ANNN	Savio and Schwab, "Lesioned corticospinal tract axons regenerate in myelin-free rat spinal cord." <i>PNAS</i> , 1990. 87(11):4130-41.
***************************************	A000	Savio and Schwab, "Rat cns white matter, but not gray matter, is non-permissive for neuronal cell adhesion and fiber outgrowth." <i>J Neurosci</i> , 1989. 9(4):1126-33.
***************************************	APPP	Schnaar, "Myelin molecules limiting nervous system plasticity." <i>Progress in Molecular and Subcellular Biology</i> , 2003. 32:125-42.
***************************************	AQQQ	Schnell and Schwab, "Axonal regeneration in the rat spinal cord produced by an antibody against myelin-associated neurite growth inhibitors." <i>Nature</i> , 1990. 343(6255):269-72.
0000000000	ARRR	Strenge et al., "Glycan specificity of myelin-associated glycoprotein and sialoadhesin deduced from interactions with synthetic oligosaccharides." Eur J Biochem, 1998. 258(2):677-85.
000000000000	ASSS	Thallmair et al., "Neurite growth inhibitors restrict plasticity and functional recovery following corticospinal tract lesions." <i>Nat. Neurosci.</i> , 1998. l(2):124-31.
0000000000	ATTT	Tang et al., "Soluble myelin-associated glycoprotein released from damaged white matter inhibits axonal regeneration." Mol Cell Neurosci., 2001. 18(3):259-69.
***************************************	AUUU	Tang et al., "Myelin-associated glycoprotein interacts with neurons via a sialic acid binding site at ARG118 and a distinct neurite inhibition site." <i>Journal of Cell Biology</i> 138:1355-1366.
	AVVV	Vogt et al., "Continuous renewal of the axonal pathway sensor apparatus by insertion of new sensor molecules into the growth cone membrane." Curr. Biol., 1996. 6:1153-8.
000000	AWWW	von Schack et al., "Complete ablation of the neurotrophin receptor p75ntr causes defects both in the nervous and the vascular system." <i>Nat Neurosci</i> , 2001. 4(10):977-8.
V	AXXX	Vyas and Sellnaar, "Brain gangliosides: functional ligands for myelin stability and the control of nerve regeneration." <i>Biochem J</i> , 2001. 83:677-82.
/ČMW/	AYYY	Vyas et al., "From the cover: Gangliosides are functional nerve cell ligands for myelin-associated glycoprotein (mag), an inhibitor of nerve regeneration." PNAS, 2002. 99(12):8412-8417.

Examiner Signature / Cherie M. Woodward/	Date Considered 12/24/2007
EXAMINER: Initials citation considered. Draw line through citation if r next communication to applicant.	not in conformance and not considered. Include copy of this form with

10551833 - GAU: 1647

Sheet <u>5</u> of <u>5</u>

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 20724-011US1	Application No.
Information Disclosure Statement by Applicant		Applicant Roman J. Giger	
(Use several sheets if necessary)	Filing Date	Group Art Unit	
(37 CFR §1.98(b))			

Other Documents (include Author, Title, Date, and Place of Publication)				
Examiner Initial	Desig. ID	Document		
/CMW/	AZZZ	Wang et al., "Oligodendrocyte-myelin glycoprotein is a nogo receptor ligand that inhibits neurite outgrowth." <i>Nature</i> , 2002. 417(6892):941-4.		
XXX	AAAAA	Wang et al., "Localization of nogo-a and nogo-66 receptor proteins at sites of axon-myelin and synaptic contact." <i>J. Neurosci.</i> , 2002. 22(13):5505-5515.		
000000000000000000000000000000000000000	ABBBB	Wang et al., "P75 interacts with the nogo receptor as a co-receptor for nogo, mag and omgp." Nature, 2002. 420(6911):74-8.		
	ACCCC	Wong et al., "p75(ntr) and nogo receptor complex mediates repulsive signaling by myelin-associated glycoprotein." <i>Nat. Neurosci.</i> , 2002. 5(12):1302-8.		
	ADDDD	Yamashita et al., "The p75 receptor transduces the signal from myelin-associated glycoprotein to rho." <i>J Cell Biol</i> , 2002. 157(4):565-70.		
000000000	AEEEE	Yang et al., "Gangliosides are neuronal ligands for myelin-associated glycoprotein." <i>PNAS</i> , 1996. 93(2):814-8.		
	AFFFF	Zimmermann and David, "The syndecans, tuners of transmembrane signaling." <i>FASEB J.</i> , 1999. 13(Suppl.):S91-S100.		
/CMW/	AGGGG	Zito and Svoboda, "Activity-dependent synaptogenesis in the adult Mammalian cortex." <i>Neuron</i> , 2002. 35(6):1015-7.		
	<u>L</u>			

Examiner Signature	/Cherie M. Woodward/	Date Considered 12/24/2007	_	
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.				